

Foreword

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are terms reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado	2490 West 26th Ave., Denver, CO 80211
New Mexico	517 Gold Ave. S.W., Room 3301, Albuquerque, NM 87102-3157
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	1201 Terminal Way, Room 219, Reno, NV 89502
Oregon	1220 Southwest 3rd Ave., Room 1640, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201-1080
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82601

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 95802; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Environment Technical Services Division, 9820 106th St., Edmonton, Alberta T5K 2J6.

Utah Water Supply Outlook and

Federal – State – Private Cooperative Snow Surveys

Issued by

Wilson Scaling
Chief
Soil Conservation Service
Washington, D. C.

Released by

Francis T. Holt
State Conservationist
Soil Conservation Service
Salt Lake City, Utah

In cooperation with

Utah State Department of Natural Resources
Robert L. Morgan D. Larry Anderson
State Engineer Director
Division of Water Rights Division of Water Resources

Prepared by

Jon G. Werner
Snow Survey Supervisor
Soil Conservation Service
125 So. State St., Fed. Bldg.
P. O. Box 11350
Salt Lake City, Utah 84147

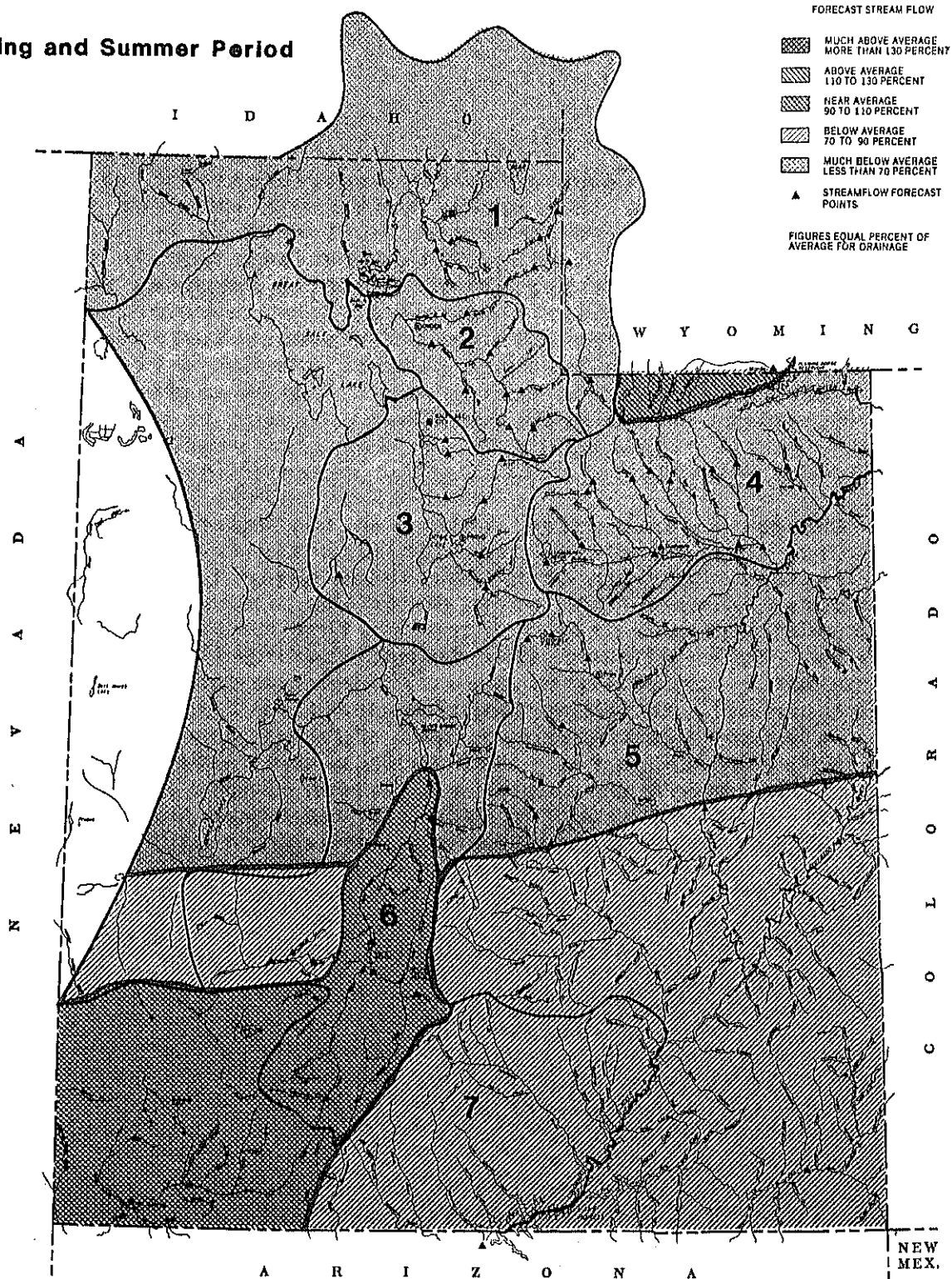
**Programs and assistance of the United States Department of Agriculture are
available without regard to race, creed, color, sex, age, or national origin.**

TABLE OF CONTENTS

STATE STREAMFLOW PROSPECTS MAP -----	1
STATE GENERAL OUTLOOK -----	2
BASIN OUTLOOK AND CONDITIONS	
BEAR RIVER BASIN -----	4
WEBER & OGDEN WATERSHEDS -----	6
UTAH LAKE, JORDAN RIVER & TOOELE VALLEY -----	8
UINTAH BASIN & DAGGET SCD's -----	10
CARBON, EMERY, WAYNE, GRAND & SAN JUAN CO. -----	12
SEVIER & BEAVER RIVER BASINS -----	14
E. GARFIELD, KANE, WASHINGTON & IRON CO. -----	16
SNOW MEASUREMENT DATA -----	18
SNOWPACK PROGRESS GRAPH -----	21
1988 SNOWPACK COMPARISON -----	22
1988 WATER CONSERVATION TIPS -----	23-26

Streamflow Prospects for Utah

Spring and Summer Period



- 1 BEAR RIVER BASIN
- 2 WEBER & OGDEN WATERSHEDS IN UTAH
- 3 UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
- 4 UINTAH BASIN & DAGGET SCD'S
- 5 CARBON, EMERY, WAYNE, GRAND & SAN JUAN CO.
- 6 SEVIER & BEAVER RIVER BASINS
- 7 E. GARFIELD, KANE, WASHINGTON & IRON CO.

GENERAL OUTLOOK

SUMMARY

Another month of below average precipitation, coupled with an earlier than normal melt, have resulted in further reductions in streamflow forecasts in northern Utah. The timing of the precipitation in April enabled reservoir operations to delay releases and continue to fill for a few more weeks, however, thereby increasing much needed reserves for later this summer. The southern part of the State received ample precipitation during April and streamflow forecasts remain near average.

SNOWPACK

Changes in snow water content on the watersheds of Utah during April varied significantly from region to region. Northern Utah watersheds began to lose snow water to melt from two to three weeks earlier than usual and lost from two to more than three and one-half times as much water to melt during the month as usual. The Sevier River watershed, in contrast, began melt at the normal time and lost slightly less water to melt than normal and southwestern Utah actually recorded a net increase in water content for the month. May 1 snow water equivalent ranges from 34% of average on the Utah Lake, Jordan River and Tooele Valley watersheds to 88% in southwestern Utah.

PRECIPITATION

April precipitation at mountain stations in northern Utah was generally in the 80 to 90% of average range. Precipitation at northern Utah Valley stations, although erratic, generally ranged from 70 to 100% of average. Seasonal precipitation (October through April) at northern Utah mountain stations is generally 70 to 80% of normal and near 70% at valley sites. Precipitation during April at southern Utah mountain stations ranged from 90 to 180%. Many southern valley stations received more than two times normal April precipitation and, overall, averaged 177%. Seasonal precipitation at southern mountain sites ranges from 90 to 110% of average. Valley stations range from 70 to 130% seasonally.

RESERVOIRS

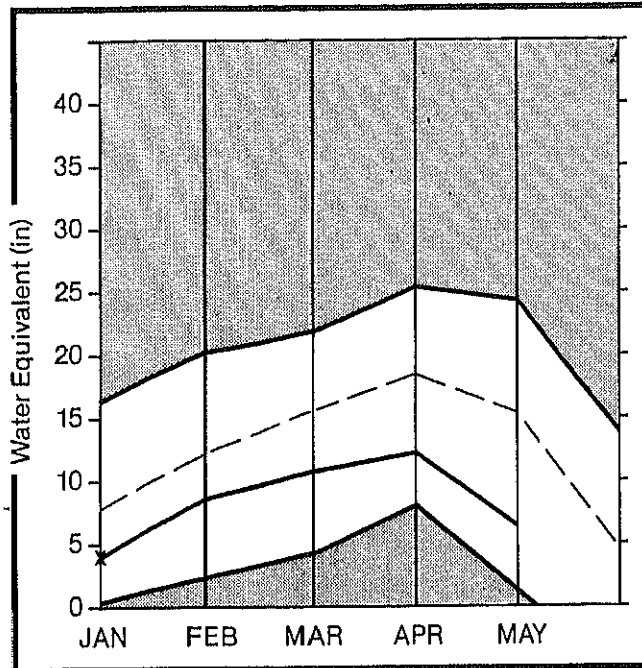
Reserves of water stored in 26 key irrigation reservoirs in Utah are 13% greater than normal for the end of April. This volume represents 86% of capacity. Last year these reservoirs held 88% of capacity in storage at the end of April. Normally the same reservoirs would only be storing 76% of capacity at this time of year. Sixteen of the 26 reservoirs in our sample have more than 90% of their useable capacity in storage. Pineview and the Enterprise Reservoirs will probably not fill this year and shortages will likely materialize. With continued spring precipitation releases could be delayed allowing East Canyon and Porcupine to fill.

STREAMFLOW




Forecasts of spring and summer streamflow on the Bear, Weber, and Provo-Utah Lake-Jordan have been reduced again this month as a result of continued below average monthly precipitation. Forecasts in these basins now range from 20 to 40% of average. Forecast flows on the north slope of the Uintas east of the Bear remain near average. South slope tributaries to the Duchesne have been reduced, however, and now range from 35 to 75% of average. Further south the situation improves with southeastern Utah forecasts in the 55 to 85% range. Forecasts on the Upper Sevier have improved slightly from last month and are near normal as are forecasts on the Virgin.

Bear River Basin

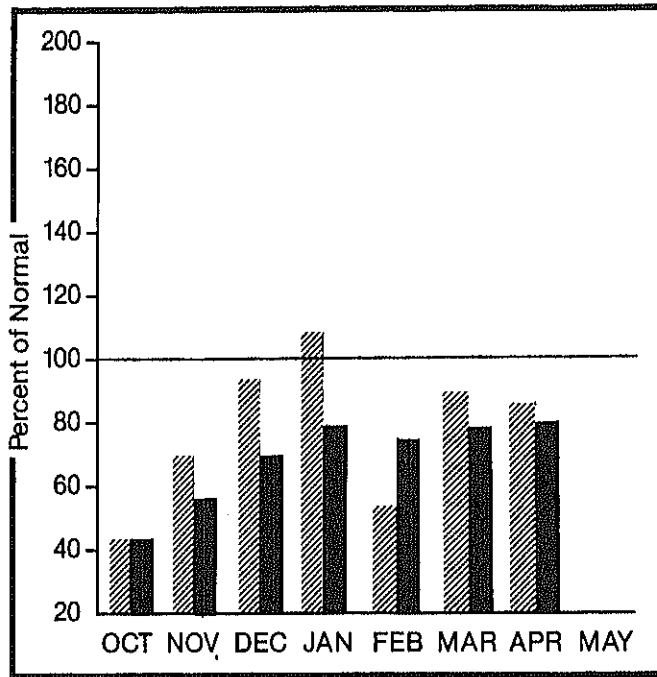
Mountain snowpack* (inches)





*Based on selected stations

Maximum  Average 
Minimum  Current 

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation  Year to date precipitation 

WATER SUPPLY OUTLOOK:

Snowpack on the Bear River watershed began to melt almost two weeks earlier than usual this year and lost more than twice as much water content to melt during April than is normal. May first snow water content is 44% of average. Mountain precipitation was 86% of average for April which brings total water year accumulation to 78% of average. Streamflow forecasts have declined from last month and now range from 30 to 60% of average. Reservoir storage is slightly less than last year at 103% of average.

For more information contact your local
Soil Conservation Service Office:
Tremonton Field Office 801-267-5403
Logan Field Office 801-753-5616

BEAR RIVER BASIN

STREAMFLOW FORECASTS

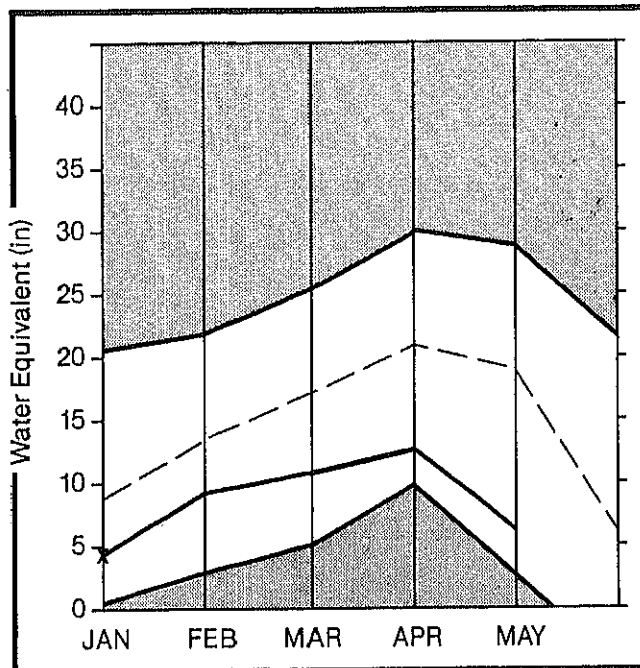
FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
BEAR RIVER near UT-WY Stateline	MAY-JUL	108.0	88.0	62	90.0	86	40.0	38
BEAR near Woodruff	MAY-JUL	124.0	63.0	50	123.0	98	21.0	17
WOODRUFF CREEK near Woodruff	MAY-JUL	15.1	4.7	31	8.0	53	2.0	13
BIG CREEK near Randolph	APR-JUL	5.3	1.5	28	4.0	75	1.0	19
BEAR RIVER near Randolph	MAY-JUL	95.0	29.0	31	73.0	77	15.0	16
SMITHS FORK near Border	APR-SEP	123.0	68.0	55	125.0	102	20.0	16
THOMAS FORK near Stateline	APR-SEP	37.0	16.0	43	33.0	89	5.0	14
BEAR RIVER near Harer	APR-SEP	310.0	139.0	45	256.0	83	60.0	19
CUB RIVER near Preston	APR-JUL	46.8	23.5	50	40.0	86	10.0	20
LITTLE BEAR RIVER near Paradise	MAY-JUN	29.0	9.3	32	20.0	69	6.0	21
LOGAN RIVER near Logan	MAY-JUL	107.0	51.0	48	70.0	65	32.0	30
BLACKSMITH FORK near Hyrum	MAY-JUL	38.0	11.9	31	22.0	58	6.0	16

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE / CAPACITY	** USEABLE STORAGE **	THIS YEAR	LAST YEAR	WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
BEAR LAKE	1421.0	1096.0	1118.9	1089.0	BEAR RIVER, UPPER IN UTAH	6	100 42
HYRUM	15.3	15.3	15.4	13.2	BEAR RIVER, LOWER IN UTAH	10	181 43
PORCUPINE	11.3	7.2	11.3	9.5	BEAR R. DRAINAGE IN UTAH	15	140 43
WOODRUFF NARROWS	55.8	55.4	57.8	---	BEAR RIVER, UPPER	12	134 48
WOODRUFF CREEK	3.5	3.5	---	---	BEAR RIVER, LOWER	13	210 39
					BEAR RIVER DRAINAGE	23	164 44
					LOGAN RIVER	5	202 46
					RAFT RIVER	0	0 0
					BEAR RIVER BASIN	25	157 44





1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
 2 - Corrected for upstream diversions or changes in reservoir storage.
 The average is computed for the 1961-85 base period.

Weber & Ogden Watersheds

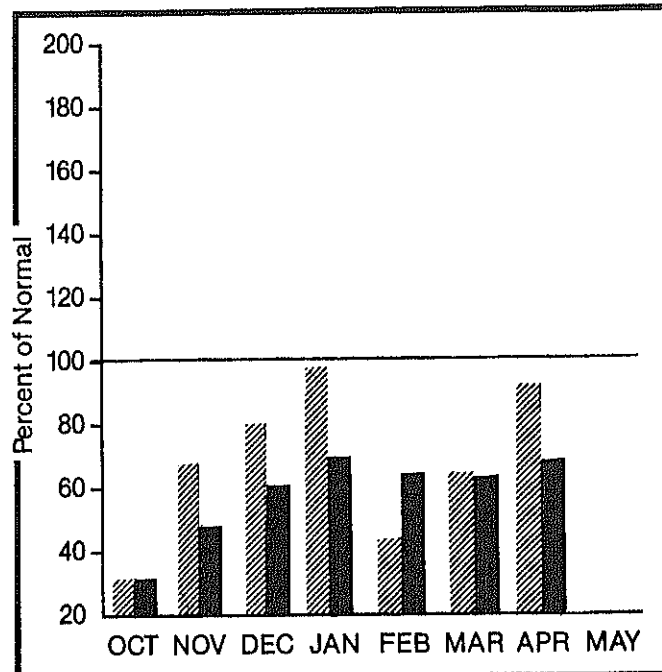
Mountain snowpack* (inches)





*Based on selected stations

Maximum  Average 
Minimum  Current 

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation  Year to date precipitation 

WATER SUPPLY OUTLOOK:

Snow water equivalent on the Weber River watershed is only 35% of normal. Peak accumulation was reached more than two weeks earlier than usual and melt during April was more than twice normal. Mountain precipitation during April continued the unbroken string of below average months of precipitation this water year with 92% of average. Water year total precipitation is 68% of normal. Streamflow forecasts now range from 20 to 51% of average. Reservoirs are holding 80% of capacity but Pineview is only 52%.

For more information contact your local
Soil Conservation Service Office
Layton Sub Office 801-544-9144

WEBER & OGDEN WATERSHEDS in Utah

STREAMFLOW FORECASTS

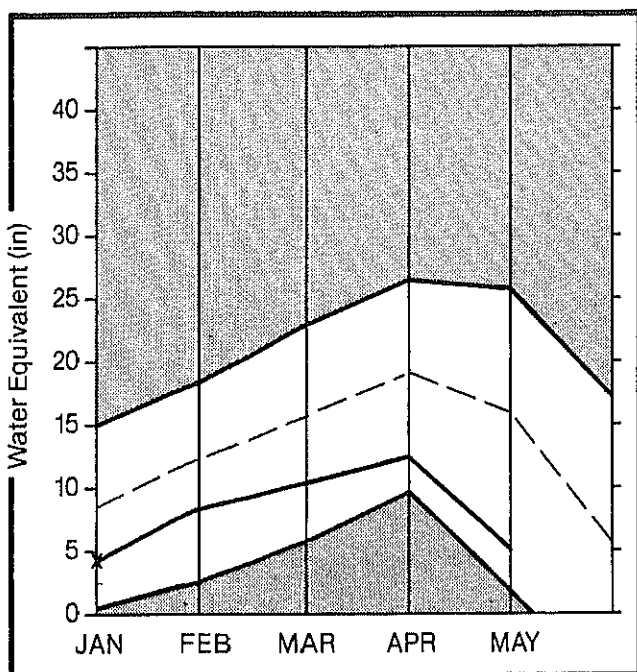
FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
SMITH AND MOOREHOUSE CREEK near Oakl	MAY-JUN	27.7	13.8	49	18.0	65	9.0	32
WEBER RIVER near Oakley	MAY-JUN	93.0	40.0	43	55.0	59	25.0	27
ROCKPORT RESERVOIR Inflow	MAY-JUN	102.0	26.0	25	50.0	49	14.0	14
CHALK CREEK near Coalville	MAY-JUN	34.0	6.8	20	17.0	50	4.0	12
WEBER RIVER near Coalville	MAY-JUN	105.0	25.0	24	49.0	47	15.0	14
ECHO RESERVOIR Inflow	MAY-JUN	128.0	27.0	21	56.0	44	14.0	11
LOST CREEK near Croyden	MAY-JUN	11.2	3.1	28	6.0	54	2.0	18
EAST CANYON CREEK near Morgan	MAY-JUN	19.0	4.5	24	12.0	63	2.0	11
HARDSCRABBLE CREEK near Porterville	APR-JUN	18.4	9.3	51	16.0	87	5.0	27
WEBER RIVER at Gateway	APR-JUN	328.0	84.0	26	146.0	45	44.0	13
SOUTH FORK OGDEN RIVER near Huntsvil	MAY-JUN	43.0	9.0	21	21.0	49	5.0	12
PINEVIEW RESERVOIR Inflow	MAY-JUN	74.0	21.0	28	36.0	49	12.0	16
WHEELER CREEK near Huntsville	APR-JUN	6.3	2.3	37	4.0	64	1.0	16
FARMINGTON CREEK near Farmington	MAY-JUL	6.7	2.0	30	5.0	75	1.0	15

RESERVOIR STORAGE		(1000AF)			WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE CAPACITY	** THIS YEAR	USEABLE STORAGE LAST YEAR	** AVG.	WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
CAUSEY	7.1	6.8	7.1	2.6	OGDEN RIVER	4	118 37
EAST CANYON	48.1	40.1	44.1	41.5	WEBER RIVER	16	99 34
ECHO	73.9	69.5	70.7	54.2	WEBER & OGDEN WATERSHEDS	20	104 35
LOST CREEK	20.0	19.4	19.0	14.9			
PINEVIEW	110.1	87.8	67.7	74.6			
ROCKPORT	60.9	41.8	45.1	36.8			
WILLARD BAY	165.5	182.5	168.1	139.7			

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
 2 - Corrected for upstream diversions or changes in reservoir storage.
 The average is computed for the 1961-85 base period.

Utah Lake, Jordan River & Tooele Valley

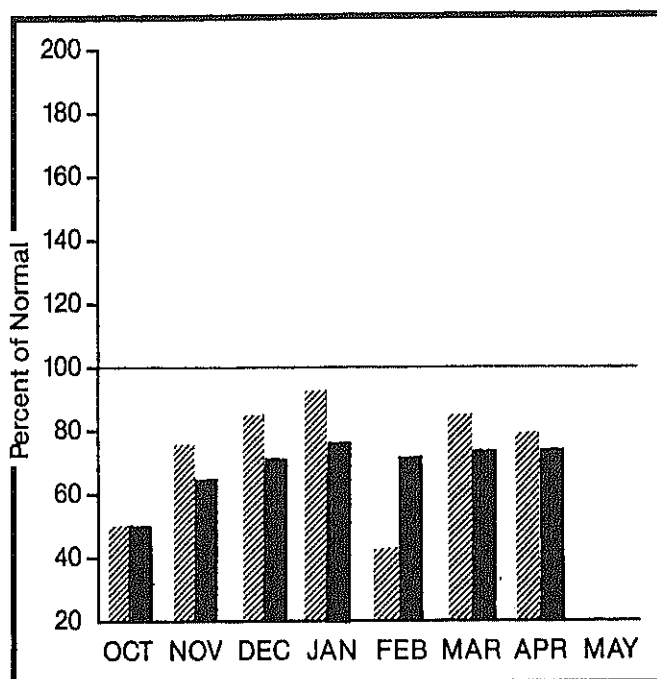
Mountain snowpack* (inches)



*Based on selected stations

Maximum Average Minimum Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation Year to date precipitation

WATER SUPPLY OUTLOOK:

Loss of snow water to melt on Jordan River and Tooele Valley tributaries began approximately two weeks earlier than usual this year and progressed at more than twice the normal rate resulting in May first water content of only 34% of average. Precipitation at mountain stations was only 78% of average in April. Seasonal precipitation is 74% of average. Forecasts of spring and summer streamflow now range from 38 to 55% of average. Area reservoirs have 97% of their cumulative capacity currently in storage.

For more information contact your local
Soil Conservation Service Office:
Midvale Field Office 801-524-4373
Provo Field Office 801-377-5580

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY

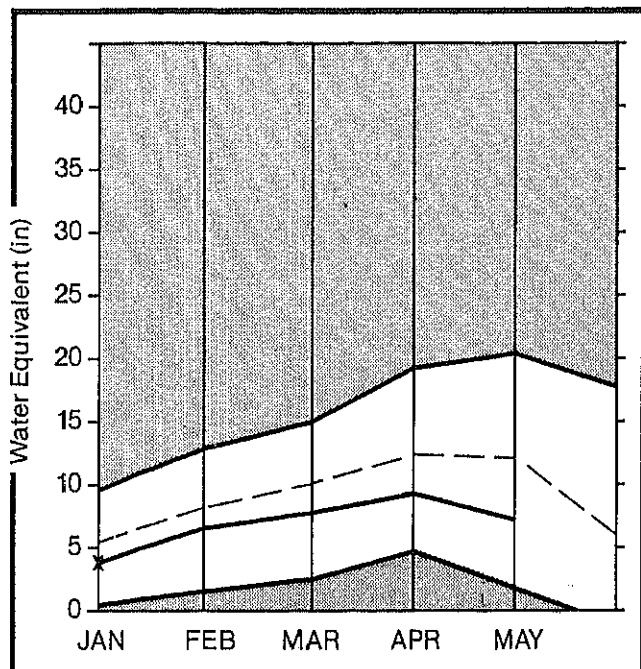
STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
BALT CREEK near Nephi	MAY-JUL	10.8	4.1	38	10.0	93	2.0	19
PAYSON CREEK near Payson	MAY-JUL	5.8	2.5	43				
HOBBLE CREEK near Springville	MAY-JUL	16.8	7.0	42				
PROVO near Hallstone	MAY-JUL	100.0	50.0	50	70.0	70	35.0	35
PROVO below Deer Creek Dam	MAY-JUL	108.0	50.0	46	75.0	69	25.0	23
AMERICAN FORK near American Fk.	MAY-JUL	30.0	14.0	47	18.0	60	11.0	37
UTAH LAKE Inflow	MAY-JUL	211.0	110.0	52	175.0	83	45.0	21
LITTLE COTTONWOOD CRK near SLC	MAY-JUL	38.0	18.0	47	21.0	55	16.0	42
BIG COTTONWOOD CRK near SLC	MAY-JUL	35.0	18.0	51	21.0	60	14.0	40
PARLEY'S CREEK near SLC	MAY-JUL	19.0	5.2	40	9.0	69	2.0	15
MILL CREEK near SLC	MAY-JUL	5.9	3.0	51	4.0	68	2.0	34
EMIGRATION CREEK near SLC	MAY-JUL	3.2	1.1	38				
CITY CREEK near SLC	MAY-JUL	7.8	3.0	38	4.0	51	2.0	26
VERNON CREEK near Vernon	MAY-JUN	0.8	0.4	55	0.8	101	0.2	25
BETTLEMENT CREEK near Tooele	MAY-JUL	2.1	0.9	43	2.0	95	0.5	24
SOUTH WILLOW CREEK near Grantsville	MAY-JUL	2.7	1.1	41	2.0	74	0.6	22

RESERVOIR STORAGE		(1000AF)			WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE CAPACITY	THIS YEAR	** USEABLE STORAGE ** LAST YEAR	AVG.	WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE	
DEER CREEK	149.6	137.5	144.1	104.9	PROVO RIVER & UTAH LAKE	10	109	91
GRANTSVILLE	3.3	3.1	3.2	---	PROVO RIVER	5	91	23
BETTLEMENT CREEK	1.0	1.0	0.8	0.7	JORDAN RIVER & GREAT SALT	12	156	94
STRANSBERRY-ENLARGED	951.4	492.6	551.8	---	TOOELE & VERNON W.B.'S	4	108	30
UTAH LAKE	855.8	833.9	849.0	744.8	UTAH L.-JORDAN R.-TOOELE	26	132	34
VERNON CREEK	0.6	0.6	0.6	0.6				

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
 2 - Corrected for upstream diversions or changes in reservoir storage.
 The average is computed for the 1961-85 base period.

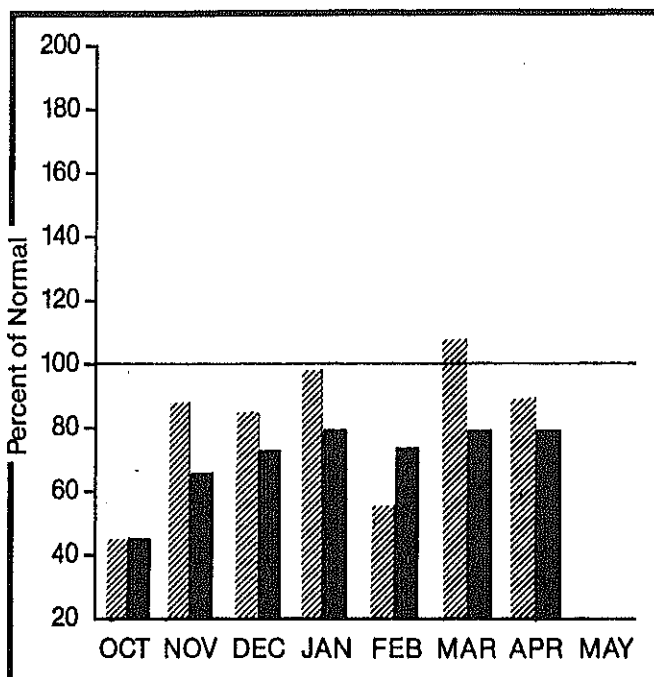
Mountain snowpack* (inches)



*Based on selected stations

Maximum Average Minimum Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation Year to date precipitation

Snowmelt commenced from one to three weeks earlier than usual on Uinta Mountain watersheds that drain into the Colorado River basin. During April more than three and one-half times normal amounts of snow water were lost to melt. May first snowpack ranges from 18 to 81% of average. Mountain precipitation was 89% of the April average bringing seasonal totals to 78%. Forecasts range for 34 to 102% of average streamflow. Reservoir storage is currently 142% of average and 94% of capacity.

For more information contact your local
Soil Conservation Service Office:
Roosevelt Field Office 801-722-4621

UINTAH BASIN & DAGGET SCD'S

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
BLACK'S FORK near Millburne	APR-JUL	80.0	81.0	90	105.0	117	60.0	67
HENRY'S FORK near Manila	APR-BEP	81.0	82.0	102	65.0	127	40.0	78
FLAMING GORGE RESERVOIR Inflow	APR-JUL	1267.0	880.0	67	1080.0	85	645.0	51
	MAY-JUL	1096.0	725.0	66	920.0	84	550.0	50
ASHLEY CREEK near Vernal	MAY-JUL	80.0	30.0	60	40.0	80	20.0	40
WEST FORK DUCHESE RIVER near Hanna	APR-JUL	28.0	16.5	58	20.0	71	11.0	39
DUCHESNE RIVER near Tablona	MAY-JUL	96.0	46.0	48	58.0	60	34.0	35
ROCK CREEK near Mountain Home	MAY-JUL	90.0	52.0	58	66.0	73	41.0	46
DUCHESNE RIVER near Duchesne	APR-JUL	189.0	108.0	56	130.0	69	80.0	42
	MAY-JUL	178.0	89.0	47	110.0	63	60.0	34
CURRENT CREEK near Fruitland	MAY-JUL	16.5	8.0	48	11.0	66	6.0	36
STRAWBERRY RESERVOIR Inflow	APR-JUL	60.0	27.0	45	38.0	63	16.0	27
	MAY-JUL	50.0	17.0	34	27.0	54	8.0	16
STRAWBERRY RIVER at Duchesne	APR-JUL	69.0	32.0	46	42.0	61	23.0	33
LAKEFORK RIVER near Mountain Home	MAY-JUL	67.0	31.0	76	62.0	93	41.0	61
YELLOWSTONE RIVER near Altonah	MAY-JUL	62.0	44.0	71	61.0	98	27.0	44
DUCHESNE near Myton	MAY-JUL	186.0	82.0	44	130.0	70	26.0	14
UINTAH RIVER near Neola	MAY-JUL	84.0	61.0	73	93.0	111	29.0	35
WHITE ROCKS RIVER near Whiterocks	MAY-JUL	57.0	40.0	70	57.0	100	23.0	40
DUCHESNE near Randlett	APR-JUL	257.0	130.0	53	200.0	78	40.0	16
	MAY-JUL	231.0	108.0	46	220.0	95	55.0	24

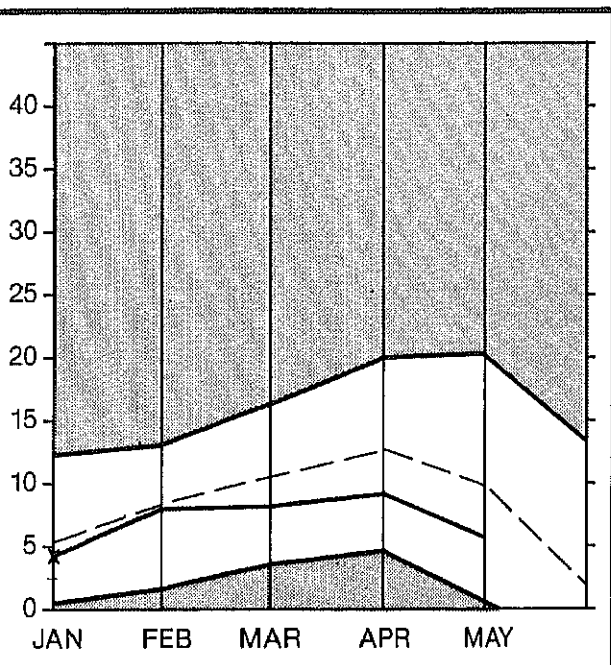
RESERVOIR STORAGE		(1000AF)			WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE	** USEABLE STORAGE **			WATERSHED	NO.	THIS YEAR AS % OF
	CAPACITY	THIS	LAST	AVG.		COURSES	LAST YR. AVERAGE
		YEAR	YEAR			AVG'D	
FLAMING GORGE	3749.0	3070.3	3136.7	---	UPPER GREEN RIVER in UTAH	13	93 64
MOON LAKE	35.8	23.6	27.4	19.1	ASHLEY CREEK	2	40 18
RED FLEET	26.0	22.5	20.8	---	BLACK'S FORK RIVER	3	115 81
STEINAKER	33.3	32.1	31.3	23.0	SHEEP CREEK	2	69 69
STARVATION	165.3	144.1	149.8	119.5	DUCHESNE RIVER	16	77 50
STRAWBERRY-ENLARGED	951.4	492.6	551.9	---	LAKE FORK-YELLOWSTONE CK.	3	63 50
					STRAWBERRY RIVER	4	213 40
					UINTAH-WHITEROCKS RIVERS	4	67 52
					UINTAH BASIN & DAGGET SCD	29	84 56

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.

2 - Corrected for upstream diversions or changes in reservoir storage.
The average is computed for the 1961-85 base period.

Carbon, Emery, Wayne, Grand, and San Juan Co.

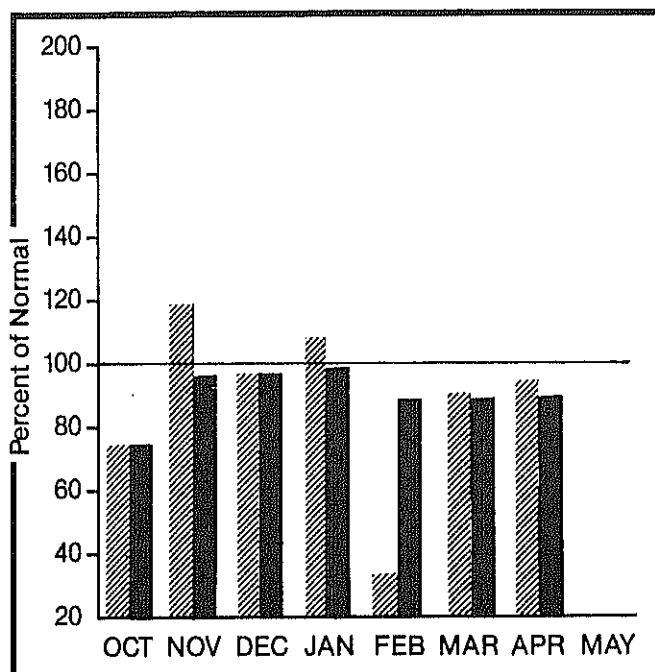
Mountain snowpack* (inches)



Based on selected stations

Maximum (stippled area)
Average (dashed line)
Current (solid line)

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation (hatched bar)
Year to date precipitation (solid bar)

WATER SUPPLY OUTLOOK:

The watersheds of southeastern Utah began to lose snow water to melt about two weeks earlier than usual this year but the amount lost in April was only slightly in excess of normal. May first snow water content is 60% of average. April precipitation at mountain stations was near normal bringing water year accumulation to 89% of average. Forecasts of spring and summer streamflow range from 55 to 65% of normal. Stored water reserves were 13% greater than usual at the end of April.

For more information contact your local
Soil Conservation Service Office:
Price Field Office 801-637-0041

STREAMFLOW FORECASTS

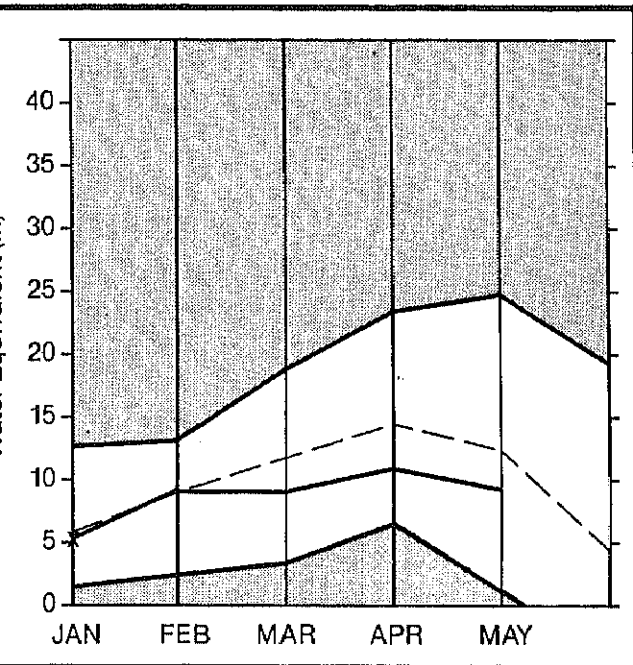
FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
COLORADO near Cisco, UT	APR-JUL	3442.0	2700.0	78	3525.0	102	1975.0	57
	MAY-JUL	2998.0	2324.0	78	3045.0	102	1695.0	57
MILL CREEK near Moab	MAY-JUL	4.7	4.0	85	5.0	106	3.0	64
GREEN near Green Rv., UT	APR-JUL	3182.0	2480.0	77	3055.0	96	1845.0	58
	MAY-JUL	2899.0	2040.0	70	2535.0	98	1545.0	59
GOOSEBERRY CREEK near Scofield	MAY-JUL	11.1	7.4	67	10.0	90	5.0	45
SCOFIELD RESERVOIR Inflow	MAY-JUL	41.8	23.0	55	30.0	72	18.0	43
PRICE near Helner	MAY-JUL	70.0	43.0	61				
ELECTRIC LAKE Inflow	MAY-JUL	13.9	8.5	61	11.0	79	7.0	50
HUNTINGTON CREEK near Huntington	MAY-JUL	48.9	30.0	61	40.0	82	25.0	51
COTTONWOOD CREEK near Orangeville	MAY-JUL	43.0	26.0	60	40.0	93	15.0	35
FERRON CREEK near Ferron	MAY-JUL	38.0	22.0	58	30.0	79	15.0	39
SEVEN MILE CREEK near Fish Lake	APR-JUL	6.5	5.4	83	7.0	108	4.0	62
MUDDY CREEK near Emery	APR-JUL	21.0	12.0	57	16.0	76	8.0	38
NAVAJO RESERVOIR Inflow	MAY-JUL	606.0	439.0	72	610.0	101	295.0	49
SAN JUAN near Bluff, UT	MAY-JUL	871.0	695.0	80	965.0	111	475.0	55

RESERVOIR STORAGE		(1000AF)			WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR	AVG.			LAST YR.	AVERAGE
HUNTINGTON NORTH	3.9	4.2	4.1	3.9	PRICE RIVER	3	292	56
JOE'S VALLEY	61.6	44.8	46.2	45.8	SAN RAFAEL RIVER	7	124	68
KEN'S LAKE	2.3	1.4	1.0	---	MUDDY RIVER	2	385	63
MILL SITE	16.7	2.4	14.8	6.3	FREMONT RIVER	4	95	50
SCOFIELD	65.8	47.7	57.9	36.4	LASAL MOUNTAINS	2	62	69
					BLUE MOUNTAINS	2	35	24
					WILLOW CREEK - WHITE RIVE	3	136	16
					SOUTHEASTERN UTAH	22	110	60

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
 2 - Corrected for upstream diversions or changes in reservoir storage.
 The average is computed for the 1961-85 base period.

Sevier & Beaver River Basins

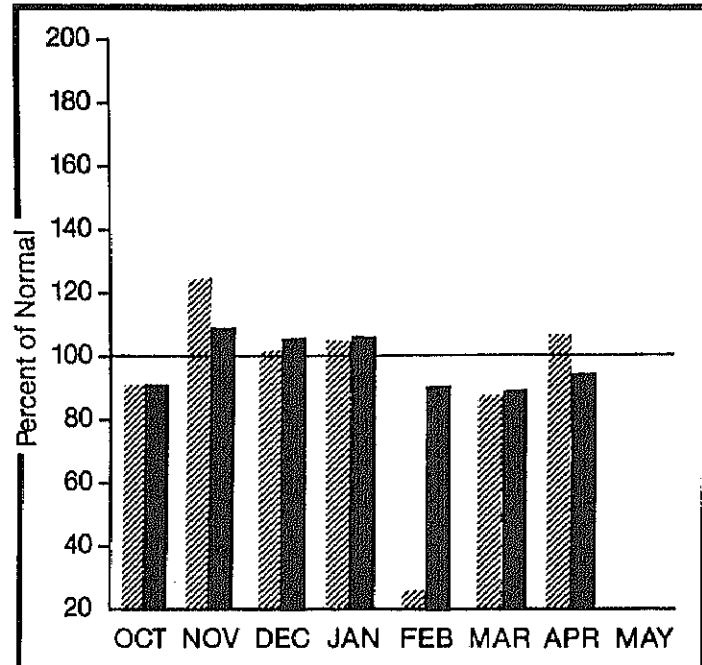
Mountain snowpack* (Inches)



Based on selected stations

Maximum  Average 
Minimum  Current 

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation  Year to date precipitation 

WATER SUPPLY OUTLOOK:

Snowpack on Sevier River watershed began to melt at the normal time this April but the amount of water lost to melt was less than average because of low temperatures and above average precipitation the last half of the month. May first snow water content is 73% of normal. April precipitation was 106% of average. Water year total is 92% of normal. Streamflow forecasts range from 43 to 110% of average and generally increase from north to south. Reservoir storage is very good. Storage is 158% of average (97% of capacity).

For more information contact your local
Soil Conservation Service Office:
Richfield Field Office 801-896-6261
Fillmore Field Office 801-743-6655

SEVIER & BEAVER RIVER BASINS

STREAMFLOW FORECASTS

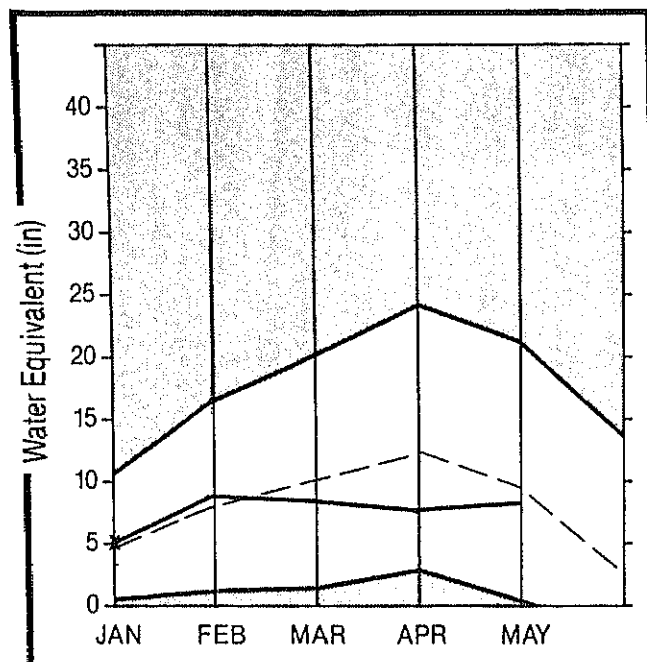
FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
SEVIER at Hatch	MAY-JUL	44.9	46.0	102	60.0	134	35.0	78
SEVIER near Circleville	MAY-JUL	36.2	40.0	110				
SEVIER near Kingston	MAY-JUL	25.7	28.0	109	45.0	175	15.0	58
ANTIMONY CREEK near Antimony	MAY-JUL	6.9	7.2	104				
E F SEVIER near Kingston	MAY-JUL	16.4	18.0	110	28.0	171	11.0	67
SEVIER b/w Piute Dam	MAY-JUL	42.0	46.0	114	76.0	181	23.0	55
CLEAR CREEK near Sevier	MAY-JUL	18.0	18.0	97				
BIGUD to GUNNISON	MAY-JUL	34.4	36.0	99	70.0	192	16.0	44
KINGSTON to VERMILLION DAM	MAY-JUN	32.7	30.0	92				
VERMILLION DAM to GUNNISON	MAR-JUN	54.0	54.0	100				
	MAY-JUL	38.0	38.0	100				
SALINA CREEK at Salina	MAY-JUN	16.2	8.0	49				
PLEASANT CREEK near Pleasant	MAY-JUL	11.6	5.0	43				
EPHRAIM CREEK near Ephraim	MAY-JUL	22.0	10.0	45				
SEVIER nr Gunnison	MAY-JUL	79.6	70.0	88				
CHICKEN CREEK near Levan	APR-JUL	3.5	1.9	54	3.0	86	1.0	29
OAK CREEK near Oak City	MAY-JUL	1.1	0.6	60	1.0	91	0.3	27
CHALK CREEK near Fillmore	MAY-JUL	18.2	9.2	70	12.0	91	6.0	45
BEAVER RIVER near Beaver	MAY-JUL	24.0	18.0	75	26.0	108	10.0	42
NORTH CREEK near Beaver (combined)	MAY-JUL	12.7	10.5	83	18.0	142	3.0	24
MINERSVILLE RESERVOIR Inflow	APR-JUN	6.9	6.9	71	10.0	112	3.0	34

RESERVOIR STORAGE		(1000AF)			WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE CAPACITY	** THIS YEAR	USEABLE STORAGE LAST YEAR	** AVG.	WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
GUNNISON	20.3	20.3	20.3	14.9	U SEVIER (s of Richfield)	11	127 77
MINERSVILLE (RkyFd)	26.0	22.9	24.3	14.4	EAST FORK SEVIER RIVER	4	118 73
OTTER CREEK	52.7	52.7	52.6	29.5	SOUTH FORK SEVIER RIVER	7	131 78
PIUTE	71.8	71.1	69.5	44.7	LOWER SEVIER RIVER	12	127 68
SEVIER BRIDGE	236.0	227.6	211.1	136.0	BEAVER RIVER	3	146 57
PANQUITCH LAKE	22.3	21.0	20.8	---	SEVIER & BEAVER R. BASINS	26	122 73

- 1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
- 2 - Corrected for upstream diversions or changes in reservoir storage.
The average is computed for the 1961-85 base period.

E. Garfield, Kane, Washington, & Iron Co.

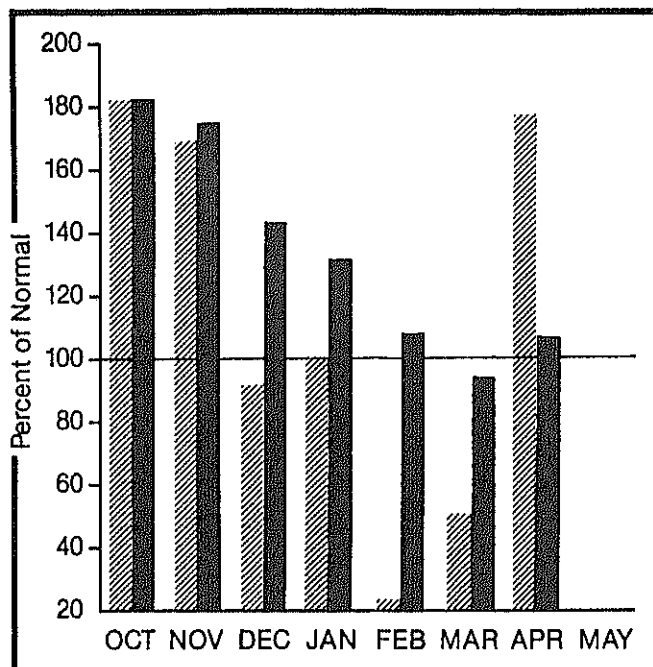
Mountain snowpack* (inches)



* Based on selected stations

Maximum  Average 
Minimum  Current 

Precipitation* (percent of normal)



* Based on selected stations

Monthly precipitation  Year to date precipitation 

WATER SUPPLY OUTLOOK:

Normally the watersheds in southwestern Utah lose about three inches of snow water content in April. This April an increase of six-tenths of an inch was recorded, reversing the melt trend that began in February and bringing May first snow water to 68% of average. Mountain precipitation was abundant at most stations. April precipitation was 177% of average. Water year precipitation is 107% of average. Local flows are forecast above average. Reservoir storage is near capacity except at Enterprise (30% of cap.).

For more information contact your local
Soil Conservation Service Office:
Cedar City Field Office 801-586-2429

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	25 YR. AVG. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVG.)	REAS. MAX. (1000AF)	REAS. MAX. (% AVG.)	REAS. MIN. (1000AF)	REAS. MIN. (% AVG.)
LAKE POWELL inflow	APR-JUL	8046.0	6300.0	78	8150.0	101	4610.0	57
	MAY-JUL	7039.0	6300.0	78	6920.0	98	3820.0	54
VIRGIN near Hurricane	MAY-JUN	43.8	50.0	114	70.0	160	30.0	68
SANTA CLARA near Pine Valley	MAY-JUN	4.0	4.6	113				
COAL CREEK near Cedar City	MAY-JUL	16.8	18.0	107	25.0	149	15.0	89

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE THIS YEAR	LAST YEAR	** AVG.	WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
GUNLOCK	10.4	10.8	7.0	---	VIRGIN RIVER	5	143 87
LAKE POWELL	25002.0	0.0	0.0	---	PAROWAN	4	144 98
QUAIL CREEK	40.0	38.0	32.0	---	ENTERPRISE TO NEW HARMONY	2	0 0
UPPER ENTERPRISE	10.0	2.8	3.0	---	COAL CREEK	3	123 80
LOWER ENTERPRISE	2.6	1.0	0.6	---	ESCALANTE RIVER	2	64 80
					SOUTHWESTERN UTAH	12	143 88

1 - Reas. max. and reas. min. forecasts are for 5% and 95% exceedance levels and also (2) below.
 2 - Corrected for upstream diversions or changes in reservoir storage.
 The average is computed for the 1961-85 base period.

SNOW MEASUREMENT DATA

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85
ALTA CENTRAL	8800	5/04	43	19.5	11.3	40.3
ASHLEY TWIN LAKES	10500	5/03	28	6.2	11.1	18.0
ATWOOD LAKE	10500	5/03	20	5.8	8.6	13.3
BEAVER CREEK DIVIDE	8280	4/27	0	0.0	0.0	6.5
BEAVER DAMS	8000	4/26	0	0.0	0.0	8.0
BEN LOMOND PEAK	8000	4/28	40	16.6	18.4	39.4
BEN LOMOND TRAIL	6000	4/28	0	.0	0.0	9.6
BEVAN'S CABIN	6450	4/29	0	.0	0.0	5.5
BIG FLAT	10290	4/26	61	19.6	14.9	21.6
BIRCH CROSSING	8100	4/25	0	0.0	0.0	2.0
BLACK'S FLAT-U.M. CK	9400	4/26	20	6.3	3.5	9.4
BLACK'S FORK	9200	4/26	-	9.0E	0.0	11.9
BLACK'S FORK GS-EF	9340	4/27	25	7.7	6.8	9.9
BLACK'S FORK JUNCTN	8930	4/27	19	5.4	2.7	8.3
BOX CREEK	9300	4/26	37	11.8	6.2	13.2
BRIAN HEAD	10000	4/25	69	23.8	20.0	22.0
BRIGHTON	8750	5/04	31	12.9	11.8	40.2
BRIGHTON CABIN	8700	5/04	19	8.9	6.7	25.5
BROWN DUCK RIDGE	10600	4/27	45	12.5	19.0	22.4
BRYCE CANYON	8000	4/28	0	0.0	0.0	0.6
BUCK FLAT	9800	4/26	34	11.8	9.6	17.2
BUCK PASTURE	9700	5/03	42	13.0	9.2	17.2
BUCKBOARD FLAT	9000	4/28	9	3.4	8.0	8.3
BUG LAKE	7950	4/28	26	9.9	8.0	19.4
BURT'S-MILLER RANCH	7900	4/27	0	0.0	0.0	2.4
CAMP JACKSON	8600	4/28	1	0.4	3.0	7.5
CASTLE VALLEY	9580	4/25	24	8.0	5.9	8.5
CHALK CREEK #1	9100	4/27	39	13.2	15.2	25.0
CHALK CREEK #2	8200	4/27	20	6.1	6.6	14.4
CHALK CREEK #3	7500	4/27	0	0.0	0.0	3.1
CHEPETA	10300	4/27	16	4.2	10.1	13.9
CHEPETA-WHITERKS. LK	10350	5/03	39	11.7	13.5	15.7
CITY CREEK	7500	5/03	9	4.2	0.0	23.2
CLEAR CREEK MEADOWS	9420				-	20.6
CLEAR CREEK RIDGE #1	9200	4/27	24	9.7	6.1	18.0
CLEAR CREEK RIDGE #2	8000	4/27	15	5.3	2.9	10.8
CLEAR CREEK RIDGE #3	6600	4/27	0	0.0	0.0	0.1
CURRENT CREEK	8000	4/27	0	0.0	0.0	2.8
DANIELS-STRAWBERRY	8000	4/27	1	0.3	0.0	9.9
DESERET PEAK	9250	4/29	27	9.8	-	26.9
DILL'S CAMP	9200	4/26	14	4.5	3.8	9.4
DONKEY RESERVOIR	9800	4/26	12	3.2	8.1	5.5
DRY BREAD POND	8350	4/28	13	5.1	1.0	18.2
DUCK CREEK R.S.	8700	4/25	-	2.1E	0.0	9.2
EAST SHINGLE LAKE	9800	5/03	51	15.8	12.2	28.9
EAST WILLOW CREEK	8250	5/01	-	0.0E	1.0	7.2
FARMINGTON CANYON	8000	4/28	26	11.0	17.1	33.7
FARMINGTON CANYON L.	6950	4/28	16	6.1	10.4	23.7
FARNSWORTH LAKE	9600	4/26	57	21.1	19.9	22.9

SNOW MEASUREMENT DATA (cont.)

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85
FISH LAKE	8700	4/26	10	3.2	1.7	5.9
FIVE POINT LAKE	11000	5/03	36	10.8	13.1	18.4
FRANCES FLATS	6700	5/03	0	0.0	0.0	0.7
G.B.R.C. HEADQUARTER	8700	4/26	33	11.9	10.9	17.6
G.B.R.C. MEADOWS	10000	4/26	58	20.0	19.4	27.2
GARDEN CITY SUMMIT	7600	4/28	19	7.5	4.2	17.2
GEORGE CREEK	8840				-	-
GOOSEBERRY R.S.	8000	4/26	17	6.3	5.4	10.0
HARDSCRABBLE	6700	4/28	0	0.0	0.0	11.1
HARRIS FLAT	7700	4/25	3	1.2	0.0	2.9
HAYDEN FORK	9400	4/27	21	8.1	8.5	16.1
HENRY'S FORK	10000	5/03	34	10.9	11.2	13.4
HEWINTA G.S.	9500	4/27	25	8.7	7.1	10.2
HIDDEN SPRINGS	5500	5/03	0	0.0	0.0	0.4
HOLE-IN-THE-ROCK	9150	4/27	13	3.5	4.0	6.0
HOLE-IN-THE-ROCK GS	8300				-	0.0
HICKERSON PARK	9100	4/27	19	6.3	6.0	6.5
HOBBLE CREEK SUMMIT	7420	4/27	0	0.0	0.0	8.3
HORSE RIDGE	8260	4/28	11	4.0	2.9	20.0
HUNTINGTON-HORSESHOE	9800	4/26	55	20.8	16.1	27.4
INDIAN CANYON	9100	4/27	19	6.2	7.2	10.9
JOHNSON VALLEY	8850	4/26	0	0.0	0.0	4.6
KILFOIL CREEK	7300	4/28	5	1.6	5.6	10.7
KILLYON CANYON	6300	5/03	0	0.0	0.0	0.0
KIMBERLY MINE (UPPER)	9300	4/26	36	13.9	13.4	17.2
KING'S CABIN (UPPER)	8730	4/28	3	0.8	4.0	9.8
KLONDIKE NARROWS	7400	4/28	9	3.7	0.0	15.8
KOLOB-CRYSTAL	9250	4/25	58	20.2	11.6	21.6
LAKEFORK BASIN	11100	5/03	45	12.6	15.0	22.4
LAKEFORK MOUNTAIN #1	10200	4/27	19	5.7	10.1	12.1
LAKEFORK MOUNTAIN #3	8400	4/27	0	0.0	0.0	2.0
LAMBS CANYON	7400	4/27	7	2.5	0.0	11.0
LASAL MOUNTAIN LOWER	8800	4/29	1	0.6	4.4	5.3
LASAL MOUNTAIN (UPP)	9850	4/29	33	13.0	17.6	14.4
LIGHTNING LAKE	10500	5/03	48	13.4	21.0	25.8
LILY LAKE	9050	4/27	17	4.6	5.6	14.2
LITTLE BEAR (LOWER)	6000	4/28	0	0.0	0.0	1.9
LITTLE BEAR (UPPER)	6550	4/28	0	0.0	0.0	5.6
LITTLE GRASSY CREEK	6100	4/25	0	0.0	0.0	0.1
LONG FLAT	8000	4/25	0	0.0	0.0	2.0
LONG VALLEY JCT.	7500	4/25	2	0.7	0.0	0.0
LOST CREEK RESERVOIR	6130	4/28	0	0.0	0.0	0.0
MAMMOTH-COTTONWOOD	8800	4/26	32	13.2	6.9	20.9
MERCHANT VALLEY (UP)	8750	4/26	22	6.9	2.7	7.9
MIDDLE BEAVER CREEK	8650				-	4.0
MIDDLE CANYON	7000	4/29	0	0.0	0.0	10.0
MIDWAY VALLEY	9800	4/25	68	23.0	18.4	24.1
MILL CREEK	6950	4/28	26	10.0	8.6	20.6
MILL D SOUTH FORK	7400	4/27	8	2.8	0.0	15.4

SNOW MEASUREMENT DATA (cont.)

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85
MONTE CRISTO R.S.	8960	4/28	32	12.9	9.8	26.5
MOSBY MOUNTAIN (LOW)	9500	4/28	16	4.0	7.5	10.5
MT. BALDY R.S.	9500	4/26	58	20.9	16.6	26.2
MUD CREEK #2	8600	4/26	14	4.8	2.6	8.9
OAK CREEK	7760	4/25	19	6.0	2.8	9.5
ONE MILE SUMMIT	7330				-	0.0
OTTER LAKE	9600	4/26	36	11.9	8.9	14.5
PANQUITCH LAKE	8200	4/25	2	0.5	0.0	1.3
PARADISE PARK	10100	4/28	25	9.0	12.0	15.2
PARLEY'S CANYON SUM.	7500	4/28	11	3.7	1.6	14.2
PAYSON R.S.	8050	4/27	18	7.2	8.2	16.3
PICKLE KEG SPRING	9600	4/26	29	11.9	9.4	15.8
PINE CANYON	8000	4/28	7	1.6	2.6	14.8
PINE CREEK	8800	4/25	32	13.0	8.7	15.5
REDDEN MINE LOWER	8500	4/27	25	9.5	4.2	17.9
RED PINE RIDGE	9200	4/26	30	11.4	7.6	15.9
REES'S FLAT	7300	4/25	8	2.7	0.1	11.0
REYNOLDS PARK	10400	5/03	43	12.9	12.2	18.0
ROCK CREEK	7900	4/27	0	0.0	0.0	1.4
ROCKY BASIN-SETTLEMT	8900	4/29	40	15.2	14.1	30.0
SEELEY CREEK R.S.	10000	4/26	45	15.5	15.3	19.0
SERGEANT LAKES	8300	5/03	19	5.7	0.0	11.7
SHINGLE MILL	6200	4/28	0	0.0	0.0	3.3
SILVER LAKE (BRIGHT.)	8730	4/27	32	14.2	10.6	28.2
SMITH & MOREHOUSE	7600	4/27	3	0.8	0.3	9.2
SNOWBIRD GAD VALLEY	9700				30.2	40.0
SOAPSTONE R.S.	7800	4/27	-	0.0E	0.0	7.2
SPIRIT LAKE	10300	4/27	29	9.2	16.4	15.9
SQUAW SPRINGS	9300	4/26	0	0.0	0.0	4.9
STEEL CREEK PARK	10100	4/27	51	17.0	16.6	19.0
STILLWATER CAMP	8550	4/27	6	1.8	2.1	8.4
STRAWBERRY DIVIDE	8400	4/29	20	8.8	0.0	14.9
STUART R.S.	7950	4/26	0	0.0	0.0	2.3
SUSC RANCH	8200	4/27	0	0.0	0.0	2.7
TALL POLES	8800	4/25	35	11.7	4.9	12.7
THAYNES CANYON	9200				-	-
THISTLE FLAT	8500				-	17.5
TIMPANOGOS DIVIDE	8140	4/27	12	4.5	5.1	23.0
TONY GROVE LAKE	8400	4/28	47	21.3	9.1	35.8
TONY GROVE R.S.	6250	4/28	0	0.0	0.0	3.8
TRIAL LAKE	9960	4/27	41	12.3	13.7	26.6
TROUT CREEK	9400	4/28	12	2.8	5.1	10.1
UPPER JOES VALLEY	8900	4/26	7	1.9	0.1	6.6
VERNON CREEK	7500	4/28	0	0.0	0.0	5.1
VIPONT	7670				-	8.0
WEBSTER FLAT	9200	4/25	35	11.6	9.7	16.3
WHITE RIVER #1	8550	4/27	19	6.6	1.3	10.6
WHITE RIVER #3	7400	4/27	0	0.0	0.0	0.8
WIDTSOE-ESCALANTE #3	9500	4/26	34	9.6	12.0	10.5
WRIGLEY CREEK	9000	4/26	14	4.6	3.5	9.0
YANKEE RESERVOIR	8700	4/25	20	7.5	5.0	7.3



United States
Department of
Agriculture

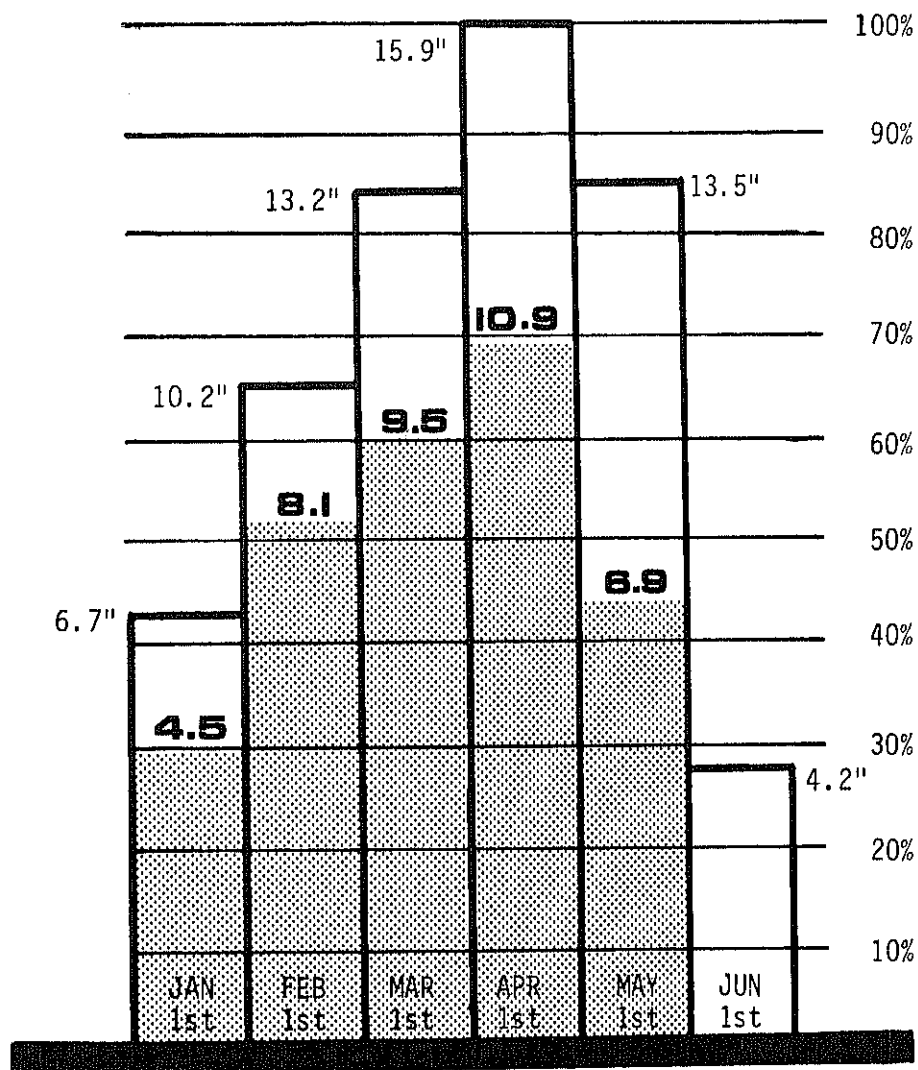
**Soil
Conservation
Service**

Salt Lake City,
Utah



Utah Snowpack Progress

1988



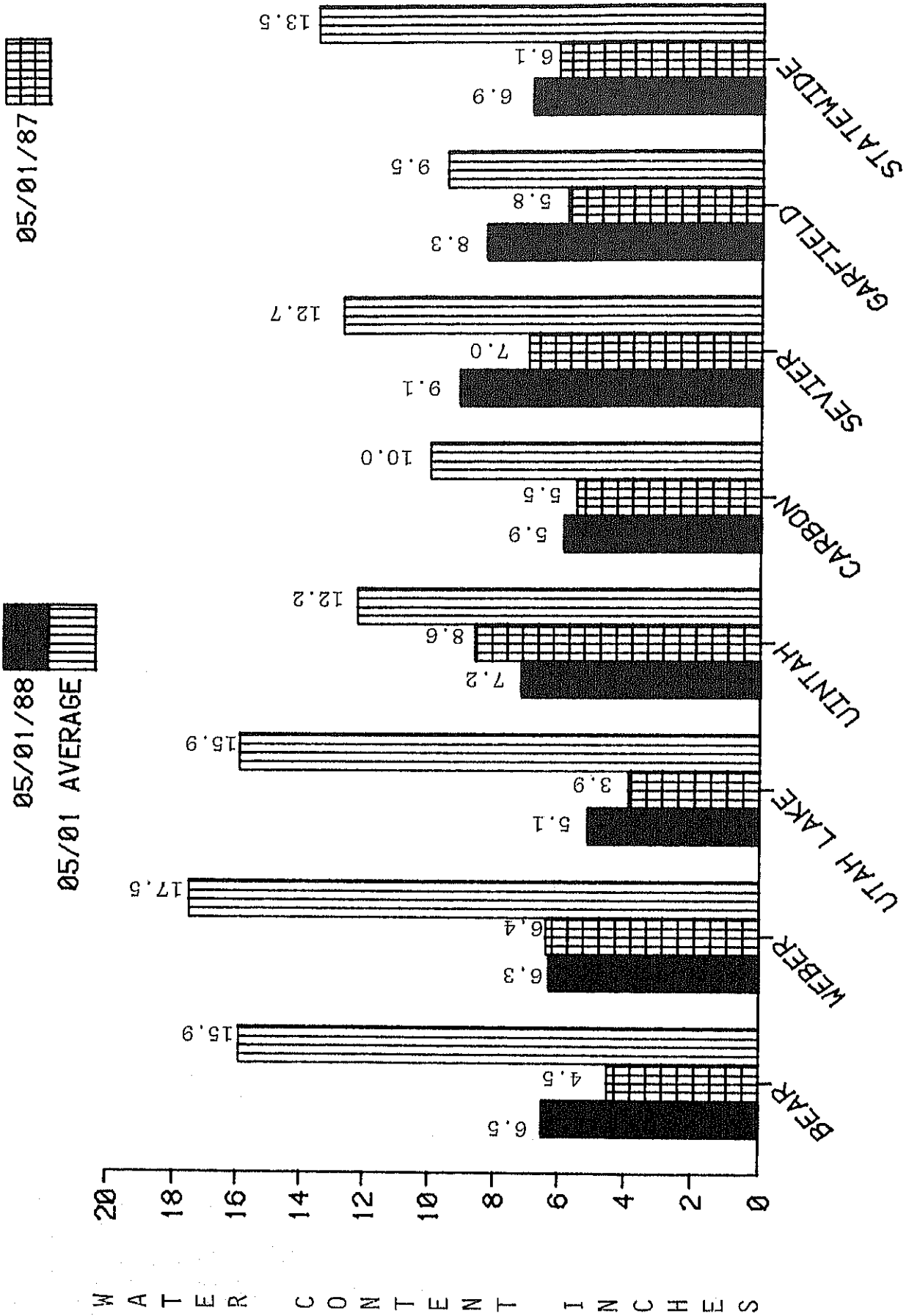
Statewide

NOTE :

Snow water equivalent in inches is compared to the highest seasonal amount (100%). Monthly averages are accumulated by basin/state.

Averages are for the period 1961-1985.

May 1, 1988





OTHER PLACES FOR INFORMATION OR ASSISTANCE

Check with local ASCS office for possible special practices or cost-sharing that might assist with major irrigation changes on your farm this year.

Maintain contact with Farmers Home Administration for special local programs or disaster loans available.

Maintain contact with the local Cooperative Extension Service office for agricultural and marketing conditions.

If you belong to an irrigation district, contact irrigation officials throughout the season to learn about current water availability and water supply forecasts.

Consult commercial irrigation equipment suppliers for system efficiency ideas.

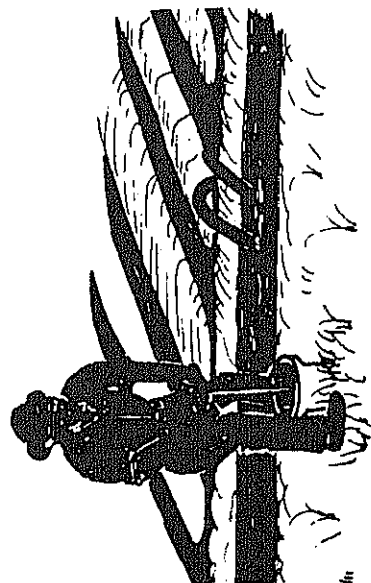
Check with your local Soil Conservation Service office and Conservation District officials for details concerning your soil and water conservation problems.



WATER CONSERVATION

TIPS

FOR STRETCHING IRRIGATION WATER



Stretch Your Irrigation Water

Soil can absorb irrigation water only at a given rate, which varies for each soil type. Water requirements vary for different crops. Make sure you apply water to your crop only when needed. Check soil moisture by space, probe, or soil moisture meter, and make careful visual checks of your crops.

If you have a conservation plan on your farm, or if the soil in your area has been mapped, the Soil Conservation Service can cross-check soil type and irrigation data and provide you with the water holding capacity of your soil for a given crop.

Don't know if your soil has been mapped? Check with the local SCS office. Even if the soil has not been mapped, the SCS can supply you with general information.

Water stretching measures are important to most farmers in the West. To use your available water in the most productive way possible, here's a checklist to help you analyze your irrigation system.

IRRIGATION SYSTEMS

Inspect your system *before* water starts to flow.

Make sure ditches are clean and free from weeds, sediment, or other debris which can slow water velocity, affect delivery rate and increase evaporation.

Consider lining ditches with concrete or plastic. This could avoid the 10-90 percent loss which often occurs in ditches.

Make sure ditch structures — like headgates, drop structures, and pipe inlets — are strong and functional. A washed-out ditch structure could mean a lot of water lost.

Make sure ditchbanks are firm and not buried into by rodents. Rodent holes could cause leakage or failures.

Make sure your pump is operating at peak efficiency. Adequate maintenance will improve efficiency, guard against water loss, and avoid shutdowns.

SPRINKLER SYSTEMS

Make sure nozzles aren't worn and leaky. Check pipe connections and valves to prevent leaks.

Operate sprinklers at recommended pressure. Use application rate, efficiency factor and time of application to figure how much to apply.

Consider trickle systems for orchards, vineyards, etc. Operate at recommended design values and maintain the filter system.

IRRIGATION MANAGEMENT

Measure the amount of water applied to the field. This can indicate when and how much to irrigate.

Consider alternate row irrigation for crops planted in furrows. But remember to alternate the "alternate" row in later irrigations.

Consider shorter runs if you furrow irrigate. Match stream size and velocity to soil intake rate and capacity.

Consider catching and re-using tail water by pumping it back to the head of the system or re-using elsewhere.

Irrigate most crops when soil moisture reaches about 50 percent of capacity.



United States
Department of
Agriculture

Soil
Conservation
Service

OTHER PLACES FOR INFORMATION OR ASSISTANCE

Consult commercial nursery or garden suppliers for plant watering requirements and recommendations.

Check with your local Soil Conservation Service office, Conservation District officials, or Cooperative Extension Service office for details concerning your water conservation questions.



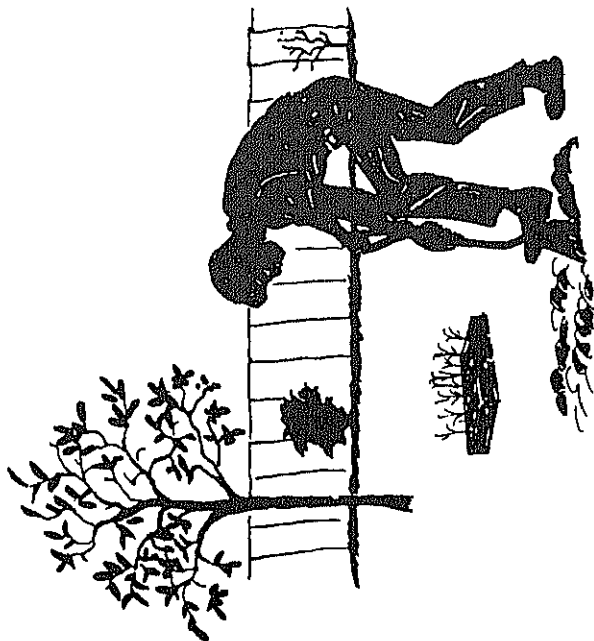
WATER CONSERVATION

TIPS

FOR STRETCHING

WATER FOR

YARDS AND GARDENS



Surviving a Water Shortage Takes Good Management

What can be done to nurture trees, shrubs, lawns and gardens through a water-short year?

First, try to learn all you can about how much water will be available and what regulations might be put into effect.

Absorb all you can about relationships among soil, water and plants — especially your own.

Develop a plan for applying water based on supply, needs, alternatives and current conditions.

Observe and measure how your plan is working.

Those plant, water and soil relationships are crucial to success of your management plan.

Plants differ in how much water they need to survive or prosper — and this varies with climate and changing weather conditions.

Sprinklers and other devices for applying water vary in how fast they can deliver water.

And finally, soils differ in how fast they absorb moisture, how much they store and how long they retain it.

A rule of thumb says 1 inch of moisture will penetrate 12 inches deep in sandy soil; 7 inches in loam, and 4 to 5 inches in clay.

ALTERNATIVES

Save water for plants that can't survive without it.

Reduce watering of other plants to subsistence level. (Lawns can do without water for a long time and green up again when moisture is available.)

Don't plant annuals when water shortage is imminent.

If a vegetable garden is important, many perennials can do without water better than annuals can.

Hold up on new landscaping or consider desert or native plants.

If you were planning to remove any lawn, trees or shrubs in the future; this would be the year to do the work before you start watering.

Change your lawn and garden watering system. Try automatic, drip or different sprinkler heads for better efficiency.

APPLY WATER EFFICIENTLY

Water deep and less often. Shallow, frequent watering encourages shallow roots, more evaporation loss and reduces the moisture reservoir in the soil.

For best results check how long it takes to soak the entire root zone and how long this watering will last.

Don't apply water faster than soil can absorb.

Don't let water run off into street or driveway.

Water early in the day to reduce evaporation loss.

CONSERVE MOISTURE

Mulch around trees and shrubs and between garden rows. This holds in moisture, discourages weeds which compete for moisture.

Aerate your lawn to permit better water penetration.

Set your lawn mower blade to leave 2 or more inches of grass after mowing.

Fertilize adequately. A sick looking lawn or garden many need more fertilizer, not more water. Apply fertilizer before regular watering.

If it rains, reduce watering time accordingly. Measure how much rain has fallen, adjust watering schedule and duration accordingly.

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

State	Utah State University Utah State Department of Natural Resources Division of Wildlife Resources Division of Water Resources Division of Water Rights Bear River Commissioner Price River Commissioner Provo River Commissioner Sevier River Commissioners Spanish Fork River Commissioner Utah Lake and Jordan River Commissioner
Federal	U.S. Department of Agriculture Soil Conservation Service Forest Service U.S. Department of Commerce NOAA, National Weather Service U.S. Department of Interior Bureau of Reclamation Geological Survey National Park Service
Municipality	Manti Salt Lake City
Public	Beaver River Water Users Association Board of Canal Presidents - Jordan River Central Utah Conservancy District Emery Canal and Reservoir Company Moon Lake Water Users Association Ogden River Water Users Association Provo River Water Users Association Strawberry Water Users Association Sevier River Water Users Association Weber River Water Users Association Weber Basin Conservancy District

Other organizations and individuals furnish information for the snow survey reports. Their cooperation is gratefully acknowledged.

All programs and services of U.S. Dept. of Agriculture are available to everyone without regard to race, creed, color, sex, age, handicap, or national origin.